

REMARKS

On page 2 of the Office, Action, the Examiner rejects Claims 28 and 29 under 35 USC § 112, first paragraph.

Applicants will shortly file an appropriate Statement of Availability so as to render moot this rejection.

On page 5 of the Office Action, the Examiner rejects Claim 29 under 35 U.S.C. 112, second paragraph.

Specifically, the Examiner contends that Claim 29 recites improper language for a Markush claim.

In view of the amendment to Claim 29, this rejection has been rendered moot.

On pages 5-6 of the Office Action, the Examiner rejects Claims 11-14 and 25-34 under 35 U.S.C. 102(b) as being anticipated by Bothe et al (*Appl. Microbiol. Biotechnol.*, 2002) as evidenced by Norferm, DA (Product brochure, 1998) and Larsen & Joergensen (*Appl. Microbiol. Biotechnol.*, 1996).

Specifically, the Examiner contends that Bothe et al disclose a composition (i.e., a bacterial biomass) comprising biomass generated from bacterial cells, wherein bacterial cells comprise at least one species of methanotrophic bacteria (such as *M. capsulatus* (Bath) NCIMB 11132) (see Bothe et al, Abstract, page 34, materials & methods, in particular) and at least one species of heterotrophic bacteria (such as *Ralstonia* sp., *Aneurinibacillus* sp., or *Brevibacillus* sp.; see Bothe et al, abstract, pages 34, 35 and 38, in particular), at least one sterile nutrient (such as components of nitrate/mineral salts, NMS medium as described by Larsen & Joergensen; cited on page 138, left column, in particular).

For the following reasons, Applicants respectfully traverse the Examiner's rejection.

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It appears that the Examiner has interpreted the term "microorganism growth substrate" as encompassing any product. Moreover, the material must be suitable for use as a microorganism growth substrate. The present claims recite such a material suitable for use as a microorganism growth substrate as evidenced by the limitation in Claim 11 that the nutrient composition is "sterilized", and that such further contains "at least one sterile nutrient".

Bothe et al relates generally to the production of BioProtein (i.e., a basic biomass). There is no teaching in Bothe et al as to the production of a sterilized biomass (or indeed any hint that this might be desirable). Thus, even when read in combination with either of Norferm, DA and Larsen & Joergensen, Bothe et al fails to disclose a material which is suitable for use as a microorganism growth substrate. In the absence of the "sterilized" limitation in Bothe et al, the subject matter of the current claims can not be considered to be anticipated by Bothe et al.

Accordingly, Applicants respectfully submit that the present invention is not anticipated by Bothe et al, and thus request withdrawal of the Examiner's rejection.

On page 8 of the Office Action, the Examiner rejects Claims 11-14 and 25-34 under 35 U.S.C. 103(a) as being unpatentable over Bothe et al (*Appl. Microbiol. Biotechnol.*, 2002), Norferm, DA (Product brochure, 1998), and Larsen & Joergensen (*Appl. Microbiol. Biotechnol.*, 1996) in view of Atlas & Parks (*Handbook of Microbiological Media*, 1993 edition).

Specifically, it is the Examiner's position that it would have been obvious to modify the microorganism growth substrate composition of Bothe et al (as supported by the disclosures of Norferm, DA and Larsen & Joergensen) such that the growth

substrate comprises a sterile nutrient, such as glucose, nitrate and mineral salts, and combinations thereof as explicitly taught by Atlas & Parks, to achieve the present invention.

For the following reasons, Applicants respectfully traverse the Examiner's rejection.

As discussed above, Bothe et al does not teach or suggest the present invention, and for the following reasons, it is clear that Atlas & Parks, does not provide the deficiencies which exist therein.

Atlas & Parks does not teach a "sterilized" nutrient composition as recited in independent Claim 11.

Applicants' surprisingly discovered that a composition which includes a "sterilized" biomass derived from the bacterial species defined in Claim 11 is particularly suitable as a substrate for the growth of microorganisms. In this regard, Bothe et al not only fails to disclose a "sterilized" composition which is a biomass generated from at least one methanotroph and at least one heterotroph, or its combination with an additional sterile nutrient, more significantly Bothe et al contains no hint or suggestion that these materials may be used in combination as a microorganism growth substrate. Thus, although Bothe et al discloses the use of a combination of bacteria in a single cell production process, there is nothing therein to suggest that the resulting single cell material, once sterilized, might be appropriate for use as a microorganism growth substrate. In the absence of any suggestion to this end use, it can not be obvious to sterilize the biomass thereof, and to combine the same with a further sterile nutrient, as required by Claim 11.

Accordingly, Applicants respectfully submit that the present invention is not taught or suggested by Bothe et al,

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alone or in view of Atlas & Parks, and thus request withdrawal of the Examiner's rejection.

In view of the amendments to the claims, and the arguments set forth above, reexamination, reconsideration and allowance are respectfully requested.

The Examiner is invited to contact the undersigned at his Washington telephone number on any questions which might arise.

Respectfully submitted,



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